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REMARKS

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The Examiner has rejected claims 1, 3-6, and 40 under 35 U.S.C. 103 as being obvious in view of U.S. Patent 6,830,650 issued to Roche *et al.*

Roche teaches a device which is used to measure variations in physical plasma parameters that occur adjacent to a process work piece such as a wafer substrate. The device makes real time measurements of plasma parameters experienced by a work piece by mounting the device on the work piece (Abstract; column 3 lines 19-25; column 6 lines 25-29). The device does not mimic the article (work piece) for which environmental parameters (plasma parameters) are being monitored, but rather is placed adjacent the article.

The device of claim 1 of the present application includes an enclosure designed to emulate the physical configuration of the articles of interest during industrial processing so as to allow the device to be embedded within the same environment as the articles. This is a feature not taught or suggested by Roche. The Examiner has cited element 58 of Roche as teaching this feature, referring to this element as an "enclosure in the form of a wafer" and referring to Figure 3 and column 6 lines 13 et seq. However nowhere does Roche teach that the enclosure is in the form of a wafer. Element 58 of Figure 3 is simply "a protective package used to shield most all other electronics from the exposure to the plasma environment" (column 6 lines 34-36). Throughout the description Roche states that the device is placed adjacent the article of interest (the work piece), and the enclosure clearly is not designed to emulate the physical configuration of the work piece. The device of Roche is simply a monitoring device, with no mention of mimicking an article which undergoes industrial processing.

Since the Examiner has not shown where each and every element of claim 1 is taught or suggested by Roche, the Applicant respectfully submits that a *prima facie* case of obviousness has not been established against claim 1.

Claim 3 includes the limitation that the shape of the enclosure is designed so as to enable embedding of the device with the articles by replicating the articles in respect of at

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least one of shape, surface texture, surface physical properties, and mass distribution. This is a feature not taught by Roche. The Examiner has cited column 13 note (4) as teaching this element. However this passage only teaches restrictions on the height and weight balance of the device with respect to conventional handling systems. Nowhere does Roche teach that the height and weight balance replicate those of the articles being monitored.

Claim 3 and claim 1 (on which claim 3 depends) clearly recite that the device is designed to physically mimic the articles being monitored, which Roche clearly does not do since the device is placed on the surface of the articles being monitored.

In addition, claim 3 is dependent on claim 1 and includes the limitations discussed above. Since the Examiner has not shown where each and every element of claim 3 is taught or suggested by Roche, the Applicant respectfully submits that a *prima facie* case of obviousness has not been established against claim 3.

Claim 4 includes the limitation that the enclosure comprises two enclosure portions and retaining means which enable assembly and disassembly of the device. This is a feature not taught by Roche. The Examiner has cited column 13 note (3) as teaching this feature. However note (3) teaches only that that hermetically sealed packaging or monolithically thick dielectric coatings should be used. Nowhere does Roche teach two enclosure portions which enable assembly and disassembly of the device. In fact in the case of electronics (which is the device of Roche), electronics are often enclosed within a cast or poured enclosure. A cast or poured enclosure can provide hermetically sealed packaging and a person of ordinary skill in the art would understand that this is what is taught by Roche, especially since Roche makes no mention of two enclosure portions or of assembly and disassembly.

In addition, claim 4 is dependent on claim 1 and includes the limitations discussed above. Since the Examiner has not shown where each and every element of claim 4 is taught or suggested by Roche, the Applicant respectfully submits that a *prima facie* case of obviousness has not been established against claim 4.

Claim 5 includes the limitation that at least one of strength, structural integrity, and rigidity is provided by a plurality of printed circuit boards which include at least one of the

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processor, the transceiver, and one of the sensors. This is a feature not taught by Roche. The Examiner has cited Figure 2a and wafer 14 as teaching this element, stating that it would have been obvious to one of ordinary skill in the art to use a plurality of such wafers in order to reduce wear. The Applicant respectfully does not understand this argument. Nowhere does Roche even suggest that a plurality of wafers 14 be used to hold the electronics of the device, and it is unclear to the Applicant how use of a plurality of wafers would reduce wear, nor how reduction of such wear would provide at least one of strength, structural integrity, and rigidity. Further more, the Examiner has referred to a wafer 14 on which the integrated circuits of Roche's device are built, and not to printed circuit boards.

In addition, claim 5 is dependent on claim 1 and includes the limitations discussed above. Since the Examiner has not clearly shown where each and every element of claim 5 is taught or suggested by Roche, the Applicant respectfully submits that a *prima facie* case of obviousness has not been established against claim 5.

Claim 6 is dependent on claim 1 and includes the limitations discussed above. Since the Examiner has not shown where each and every element of claim 6 is taught or suggested by Roche, the Applicant respectfully submits that a *prima facie* case of obviousness has not been established against claim 6.

The Examiner has not provided reasons why claims 7 and 8 are obvious in view of Roche. In addition, claims 7 and 8 are dependent on claim 1 and include the limitations discussed above. Since the Examiner has not shown where each and every element of claims 7 and 8 is taught or suggested by Roche, the Applicant respectfully submits that a *prima facie* case of obviousness has not been established against claims 7 and 8.

In rejecting claim 40, the Examiner has not addressed the elements of claim 40 but rather has addressed claim 40 as if it were the same as claim 1. Claim 40 is distinct from claim 1, being directed to a different category of claim and containing different elements. Furthermore, claim 40 is directed to a method of monitoring environmental conditions experienced by articles using a monitoring device having an enclosure designed to emulate the physical configuration of the articles. For the reasons discussed above with reference to

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claim 1, Roche does not teach use of a device having an enclosure designed to emulate the physical configuration of articles, but rather is placed on top of a work piece. Since the Examiner has not shown where each and every element of claim 40 is taught or suggested by Roche, the Applicant respectfully submits that a *prima facie* case of obviousness has not been established against claim 40.

The Examiner has rejected claims 1, 3-6, and 40 under 35 U.S.C. 103 as being obvious in view of U.S. Patent 7,174,277 issued to Vock *et al.*

Vock teaches a system by which sensors monitor environmental conditions experienced by products during shipping, the sensors being attached to different locations on the product (Abstract). This is clearly different from the present invention, in which the sensors are within enclosures designed to mimic the product. By mimicking the product, the device of the present invention can undergo exactly the same industrial processing as the products since the device can for example (as appropriate to the particular industrial processing) be placed alongside the products in the same containers, travel along the same conveyor belts, be manipulated by the same machinery, and be stored in the same circumstances.

The differences between Vock and the present invention will be seen more clearly by considering the individual elements of the claims.

The device of claim 1 of the present application includes an enclosure designed to emulate the physical configuration of the articles of interest during industrial processing so as to allow the device to be embedded within the same environment as the articles. This is a feature not taught or suggested by Vock. The Examiner states that Vock teaches an enclosure which may be embedded with other packages during processing as element 867. However, package 867 is not the enclosure of the monitoring device but rather is the package of the product to which the monitoring device 865 is attached. The Examiner is referred to column 53 lines 16-17. The Examiner is also referred to the example application presented by Vock at column 52 lines 56-61 in which the device is attached to a new computer. The device of Vock clearly does not have an enclosure which mimics a computer, but is merely attached to a computer as is common in the art. Vock is therefore

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not teaching that the device includes an enclosure designed to emulate the physical configuration of the articles of interest, but rather simply attaches to the articles of interest with no restriction on the enclosure of the device.

The device of claim 1 also includes a processor which derives at least one environmental parameter value from a plurality of sensor output measurements obtained from a plurality of sensors. This is a feature not taught or suggested by Vock. The Examiner has stated that Vock teaches a processor 848 that manages and controls the device at column 53 lines 10-11, and that it would be obvious to one of ordinary skill in the art to have realized that any processing of the signals would be done in the processor since it is recited as a managing and control device. The Applicant respectfully disagrees with this conclusion. "Managing and control" is different from "derivation of parameter values". For example, it would be equally feasible for the system of Vock to perform processing of the signals in the wireless receiving device, if such processing is even done, and in fact may well be more desirable since this simplifies the processor.

Since the Examiner has not shown where each and every element of claim 1 is taught or suggested by Vock, the Applicant respectfully submits that a *prima facie* case of obviousness has not been established against claim 1.

Claim 3 includes the limitation that the shape of the enclosure is designed so as to enable embedding of the device with the articles by replicating the articles in respect of at least one of shape, surface texture, surface physical properties, and mass distribution. This is a feature not taught by Vock. The Examiner has stated simply that "the shape of the enclosure is a package as is used in shipping". As explained above with reference to claim 1 the device of Vock is attached to a package, and does not itself have an enclosure which is a package as is used in shipping.

In addition, claim 3 is dependent on claim 1 and includes the limitations discussed above. Since the Examiner has not shown where each and every element of claim 3 is taught or suggested by Vock, the Applicant respectfully submits that a *prima facie* case of obviousness has not been established against claim 3.

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Claims 6 and 7 are dependent on claim 1 and include the limitations discussed above. Since the Examiner has not shown where each and every element of claims 6 and 7 is taught or suggested by Vock, the Applicant respectfully submits that a *prima facie* case of obviousness has not been established against claims 6 and 7.

Claim 8 includes the limitation that the device includes three single-axis bi-directional sensors orthogonally oriented with respect to each other and situated about the center of mass of the device. This is a feature not taught by Vock. The Examiner states that a different embodiment of Vock teaches use of a 3-axis accelerometer to measure impacts. However a 3-axis accelerometer is different from three single-axis accelerometers. The use of three single-axis accelerometers (as recited in claim 8) allows spatial distribution of the accelerometers about the center of mass of the device, which provides enhanced data. This spatial distribution about the center of mass of the device cannot be achieved with the use of a single 3-axis accelerometer.

In addition, claim 8 is dependent on claim 1 and includes the limitations discussed above. Since the Examiner has not shown where each and every element of claim 8 is taught or suggested by Vock, the Applicant respectfully submits that a *prima facie* case of obviousness has not been established against claim 8.

In rejecting claim 40, the Examiner has not addressed the elements of claim 40 but rather has addressed claim 40 as if it were the same as claim 1. Claim 40 is distinct from claim 1, being directed to a different category of claim and containing different elements. Furthermore, claim 40 is directed to a method of monitoring environmental conditions experienced by articles using a monitoring device having an enclosure designed to emulate the physical configuration of the articles. For the reasons discussed above with reference to claim 1, Vock does not teach use of a device having an enclosure designed to emulate the physical configuration of articles, but rather use of a device which is attached to a product. Since the Examiner has not shown where each and every element of claim 40 is taught or suggested by Vock, the Applicant respectfully submits that a *prima facie* case of obviousness has not been established against claim 40.

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In view of the foregoing, it is believed that the claims at present on file are in condition for allowance. Reconsideration and action to this end is respectfully requested.

Respectfully submitted,


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